Access DB# 74073

Search Request Form

Scientific and Technical Information Center

Requester's Full Name: L. Eric Crane Examiner #: 65753 Date: **08/25/02**
Art Unit: 1623 Phone Number: **308-4639** Serial No. **10/018,466.**
Mail Box & Bldg/Room Loc: 8D-14/CM-1 Results Format Preferred: **PAPER**
[8B-19/CM-1]

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, key words, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and/or abstract..

Title of Invention: See attached copy of claims.
Inventors (please provide full names): See attached copy of claims.
Earliest Priority Filing Date: **06/21/00**

**For Sequence Searches only* Please include all of the pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for the compounds of claim 1 wherein R_1 is limited to $-C(=O)NR_5R_6$. Search should find the PCT priority document (WO 00/78779).

Point of Contact:
Thomas G. Larson, Ph.D.
703-308-7309
CM1, Rm. 6 B 01

****

STAFF USE ONLY

	Type of Search	Vendors/cost as applicable
Searcher: ~~Point of Contact: Thomas G. Larson, Ph.D.~~	NA Sequence(#) _____	STN _____
Searcher Phone #: ~~703-308-7309~~	AA Sequence(#) _____	Dialog _____
Searcher Location: ~~CM1, Rm. 6 B 01~~	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: 8/26	Bibliographic _____	Dr. Link _____
Date Completed: 8/28	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Full Text _____	Seq.Syst'ms _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other(Specify) _____

PTO-1590 (8-2001)

structure search – CAS

Point of Contact:
Thomas G. Larson, Ph.D.
703-308-7309
CM1, Rm. 6 B 01

```
=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 16:03:18 ON 28 AUG 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 28 Aug 2002  VOL 137 ISS 9
FILE LAST UPDATED: 26 Aug 2002  (20020826/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> d que l25
L1             1 SEA FILE=CAPLUS ABB=ON  PLU=ON  WO200078779/PN
L19        86848 SEA FILE=REGISTRY ABB=ON  PLU=ON  16.138.1/RID AND 333.446.88/R
                 ID
L20           53 SEA FILE=REGISTRY ABB=ON  PLU=ON  L19 AND 16.165.12/RID
L21              STR
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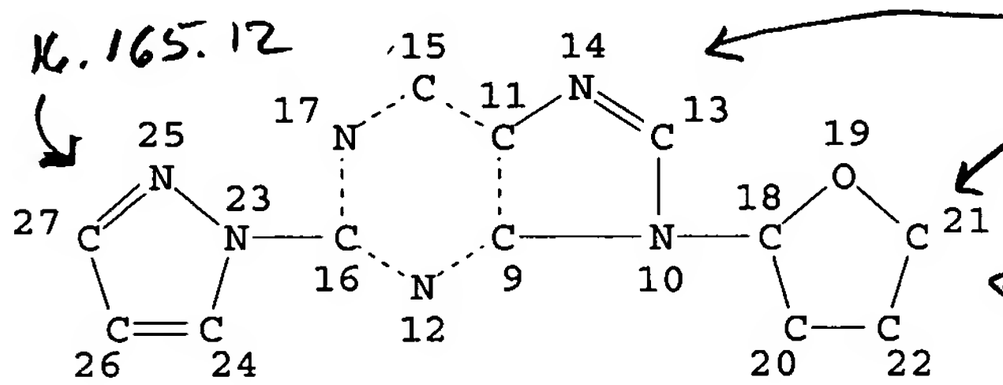
Dictionary search for any structure having the three rings present in the query

RID = 16.165.12

RID = 333.446.88



Leave open to any substitution at R_1

RID = 16.138.1

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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  19

STEREO ATTRIBUTES: NONE
L23           17 SEA FILE=REGISTRY SUB=L20 SSS FUL L21
L24            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L23
L25            4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 NOT L1

=> D IBIB ABS HITSTR 1-4 l25
```

Search subset from dictionary search in L20 with structure in L21.

cross back to HCA

Remove WO 00/78779

– Display results. No $R_1 = -\overset{O}{\overset{\|}{C}}-N\!\!\diagdown$ found.

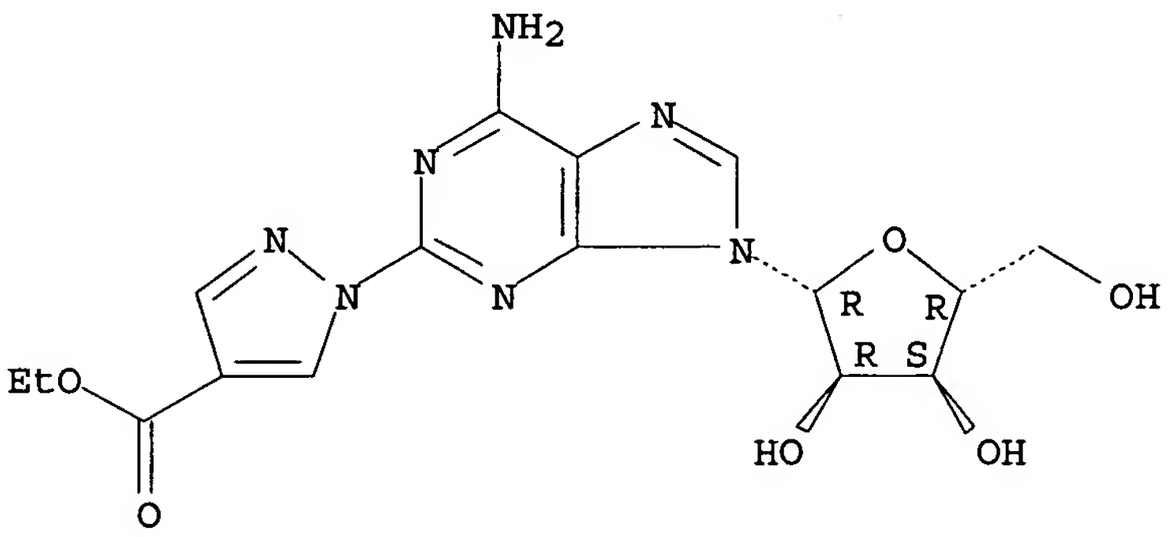
Searched by Thom Larson, STIC, 308-7309

L25 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:674877 HCAPLUS
DOCUMENT NUMBER: 136:48208
TITLE: 2-substituted PI system derivatives of adenosine that are coronary vasodilators acting via the A2A adenosine receptor
AUTHOR(S): Zablocki, J.; Palle, V.; Blackburn, B.; Elzein, E.; Nudelman, G.; Gothe, S.; Gao, Z.; Li, Z.; Meyer, S.; Belardinelli, L.
CORPORATE SOURCE: CV Therapeutics Dept. of Bioorganic Chemistry, Palo Alto, CA, USA
SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2001), 20(4-7), 343-360
CODEN: NNNAFY; ISSN: 1525-7770
PUBLISHER: Marcel Dekker, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB CVT-3146, 2-(N-1-(4-N-methylcarboxamidopyrazolyl)) adenosine deriv. and compd. CVT-3033, 2-(4-(1-N-pentylpyrazolyl)) adenosine deriv., were found to be short acting functionally selective coronary vasodilators (CV t0.5 = 5.2.+-.0.2 and 3.4.+-.0.5 min, resp. - rat isolated heart 50% reversal time) with good potency (EC50S = 6.4.+-.1.2 nM and 67.9.+-.16.7 nM, resp.), but they possess low affinity for the ADO A2A receptor (Ki = 1122.+-.323 nM and 2138.+-.952 nM, resp.; pig striatum).

IT **313348-16-2P**
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(2-substituted PI system derivs. of adenosine as coronary vasodilators acting via A2A adenosine receptor)
RN 313348-16-2 HCAPLUS
CN 1H-Pyrazole-4-carboxylic acid, 1-(6-amino-9-.beta.-D-ribofuranosyl-9H-purin-2-yl)-, ethyl ester (9CI) (CA INDEX NAME)

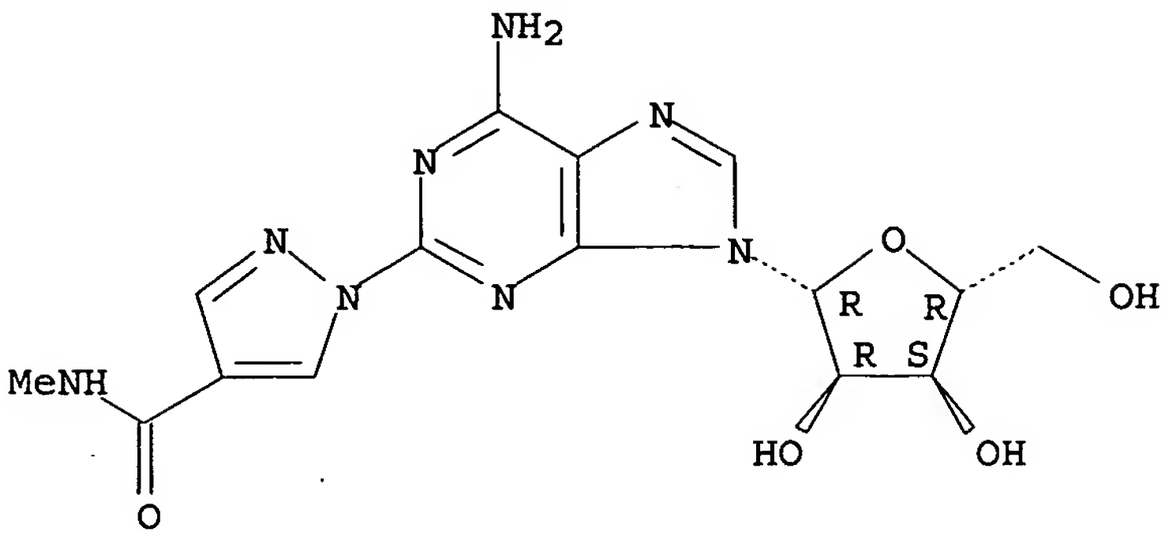
Absolute stereochemistry.



IT **313348-27-5P 313348-33-3P 313348-37-7P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(2-substituted PI system derivs. of adenosine as coronary vasodilators acting via A2A adenosine receptor)
RN 313348-27-5 HCAPLUS
CN Adenosine, 2-[4-[(methylamino)carbonyl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

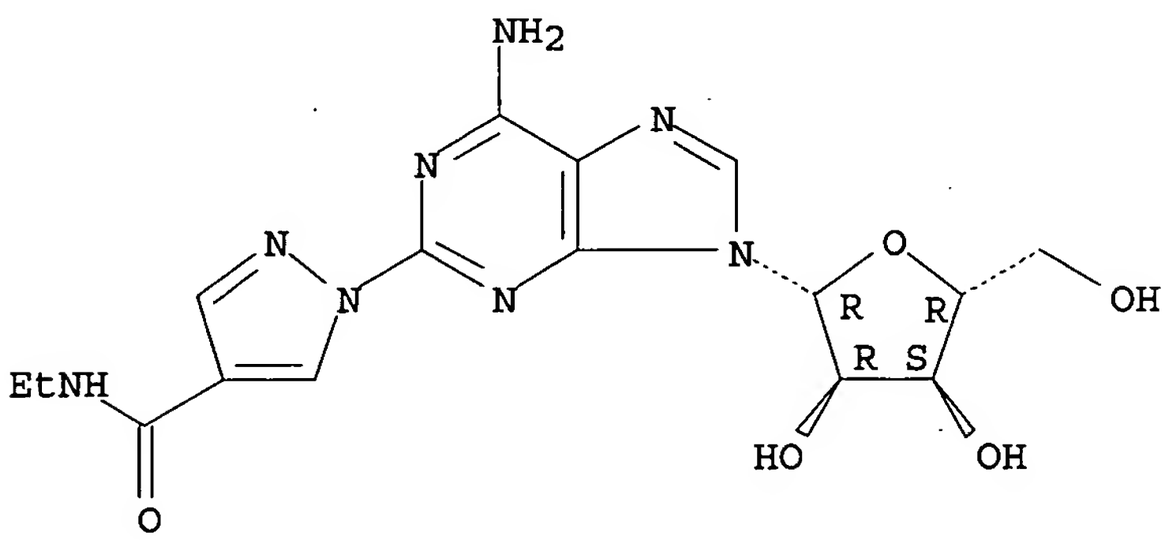
Searched by Thom Larson, STIC, 308-7309

Absolute stereochemistry.



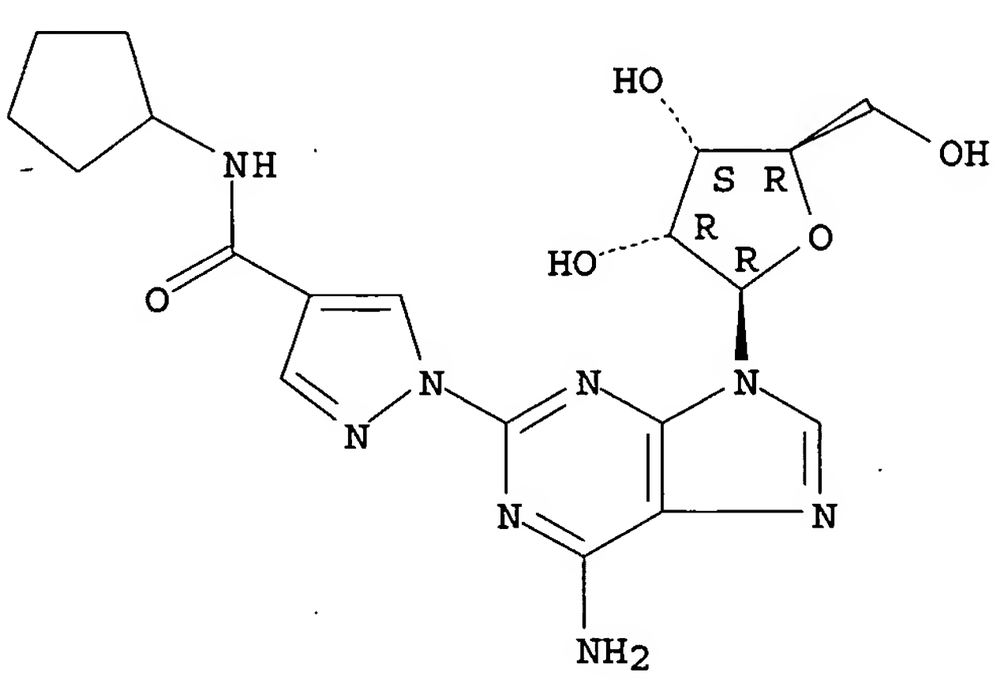
RN 313348-33-3 HCAPLUS
CN Adenosine, 2-[4-[(ethylamino)carbonyl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 313348-37-7 HCAPLUS
CN Adenosine, 2-[4-[(cyclopentylamino)carbonyl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



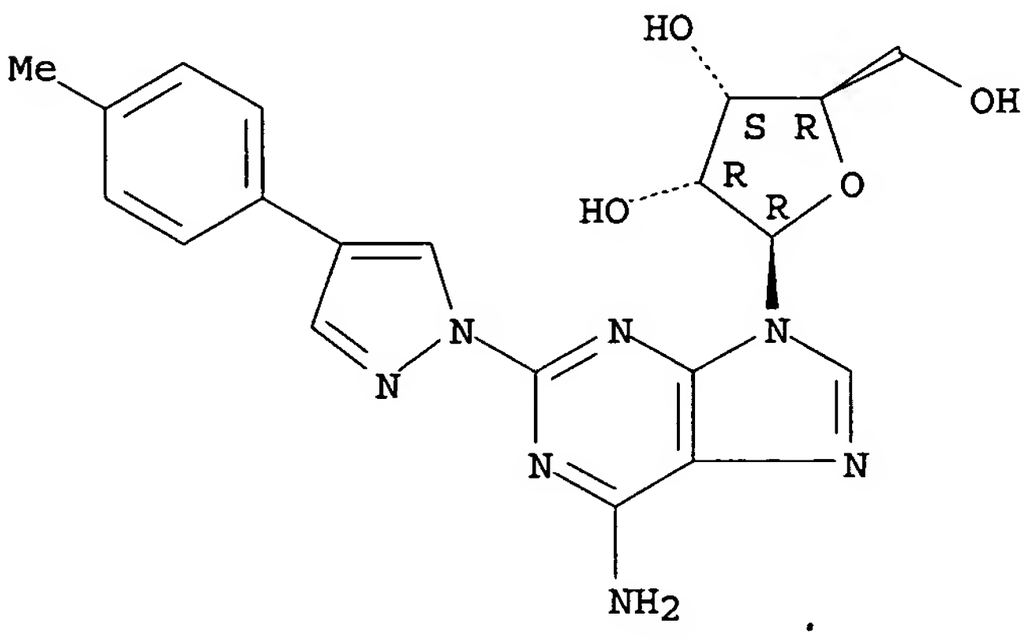
IT **313348-25-3 381689-02-7**

Searched by Thom Larson, STIC, 308-7309

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(2-substituted PI system derivs. of adenosine as coronary vasodilators acting via A2A adenosine receptor)

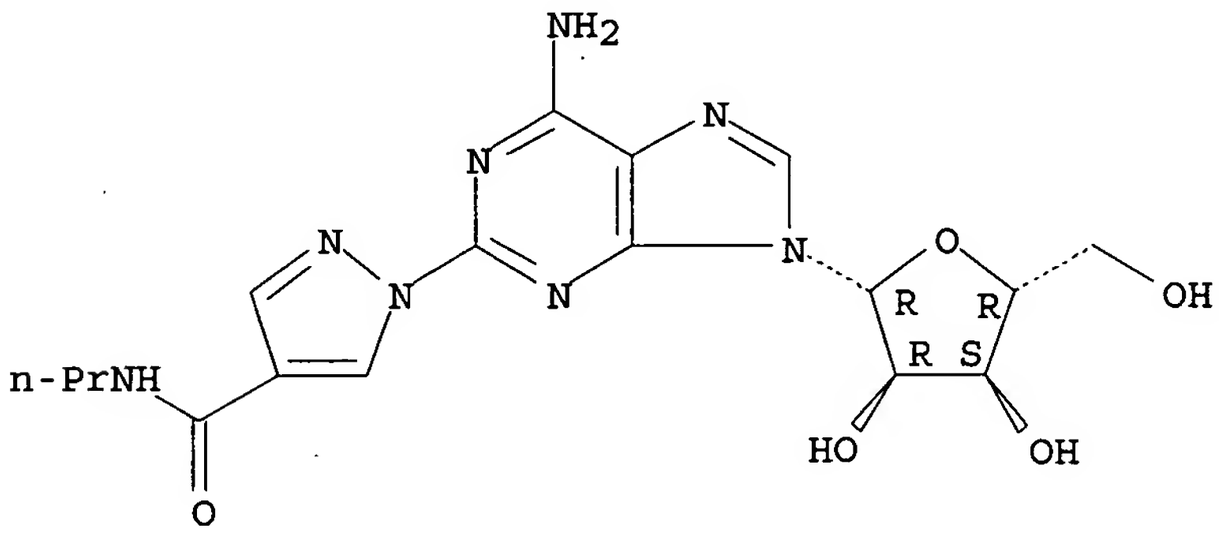
RN 313348-25-3 HCAPLUS
CN Adenosine, 2-[4-(4-methylphenyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 381689-02-7 HCAPLUS
CN Adenosine, 2-[4-[(propylamino)carbonyl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:636269 HCAPLUS
DOCUMENT NUMBER: 135:190434
TITLE: Method of identifying partial agonists of the A2A receptor
INVENTOR(S): Belardinelli, Luiz; Blackburn, Brent; Gao, Zhenhai
PATENT ASSIGNEE(S): CV Therapeutics, Inc., USA
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

Searched by Thom Larson, STIC, 308-7309

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001062979	A2	20010830	WO 2001-US5831	20010223
WO 2001062979	A3	20020228		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2002012946	A1	20020131	US 2001-792617	20010223

PRIORITY APPLN. INFO.:

US 2000-184296P P 20000223
US 2000-219876P P 20000721

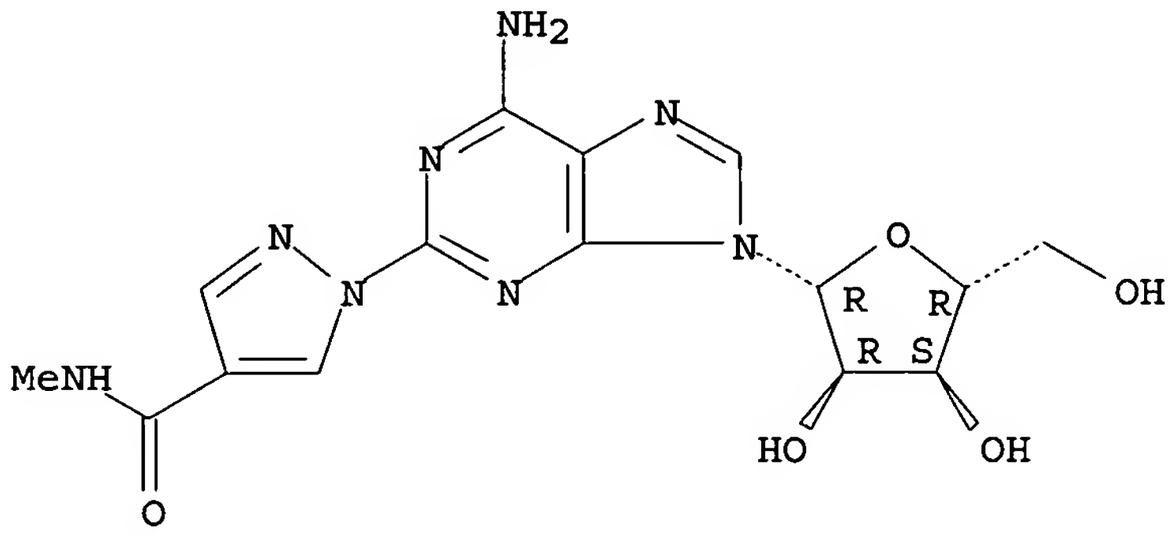
AB The present invention provides a method for identifying and using partial adenosine A2A receptor agonists that are useful as adjuncts in myocardiol. perfusion imaging. In myocardial perfusion imaging, blood flow is measured at rest and during exercise. Because many patients are unable to exercise at levels necessary to provide sufficient blood flow, a pharmacol. agent that increase CBF for a short period of time without causing peripheral vasodilation would be of benefit. We have discovered a method for identifying A2A receptor agonists that produce the desired vasodilation in the heart but do not affect the peripheral vasculature.

IT **313348-27-5**, CVT 3146
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(method of identifying partial agonists of A2A receptor and their use in myocardial perfusion imaging)

RN 313348-27-5 HCAPLUS

CN Adenosine, 2-[4-[(methylamino)carbonyl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



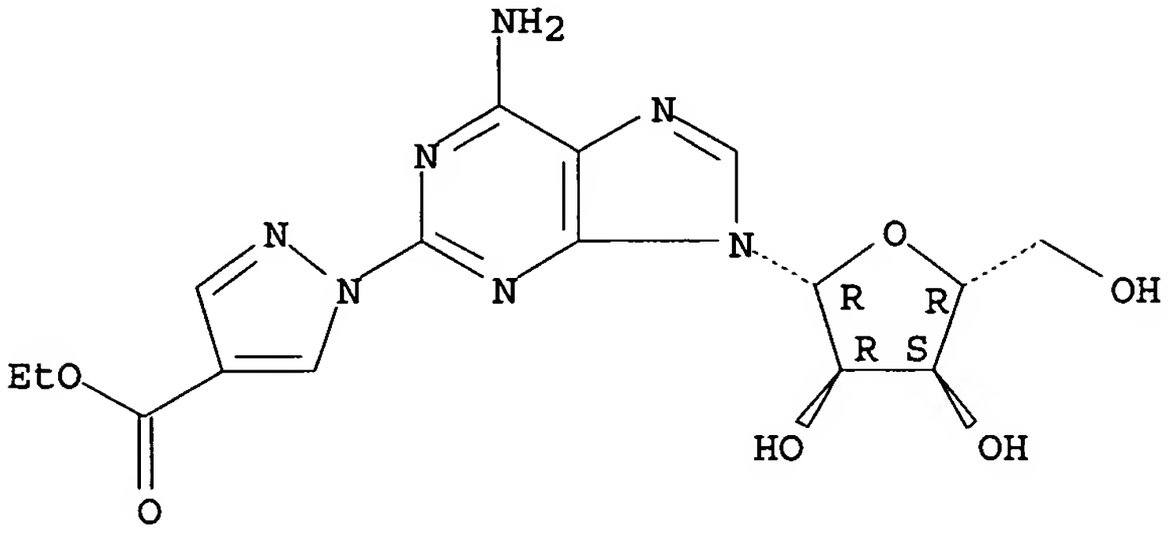
IT **313348-16-2**, CVT 3127 **313348-20-8** **313348-25-3**, CVT 3144
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(method of identifying partial agonists of A2A receptor and their use in myocardial perfusion imaging)

RN 313348-16-2 HCAPLUS

Searched by Thom Larson, STIC, 308-7309

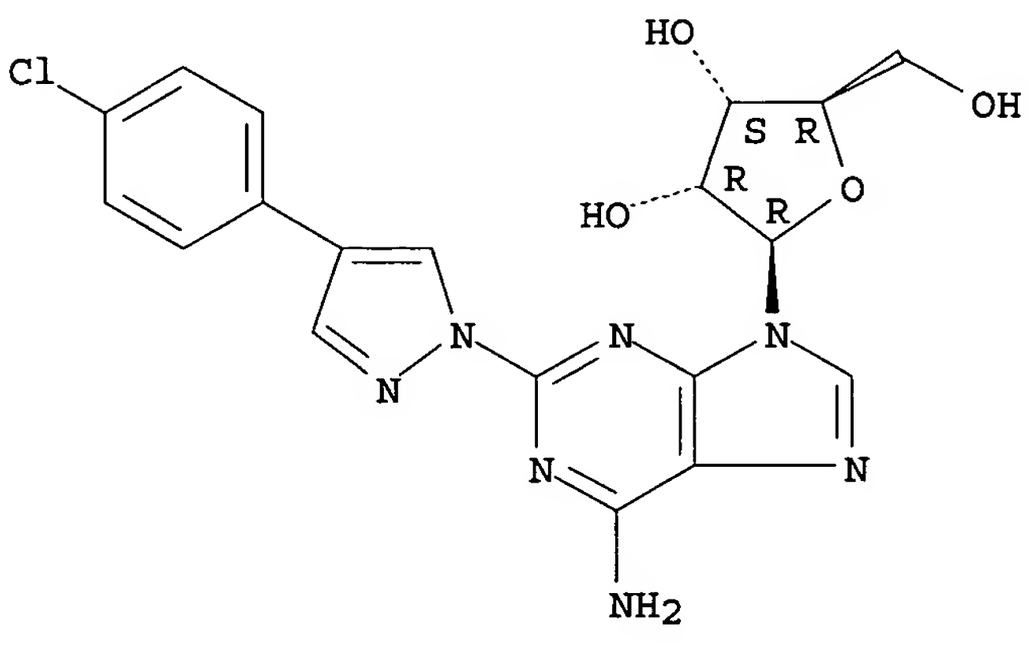
CN 1H-Pyrazole-4-carboxylic acid, 1-(6-amino-9-.beta.-D-ribofuranosyl-9H-purin-2-yl)-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



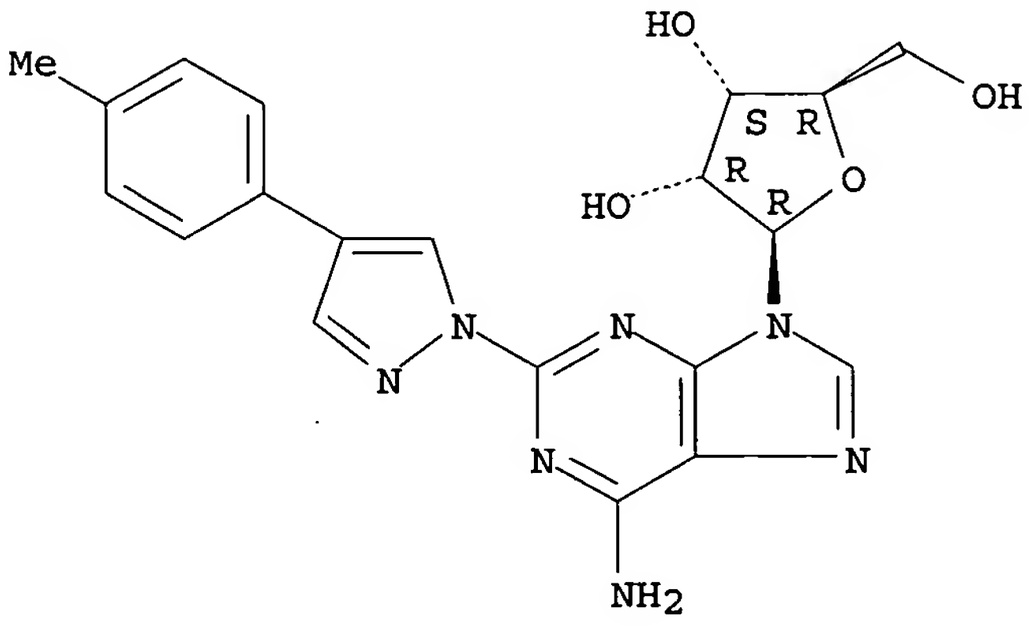
RN 313348-20-8 HCAPLUS
CN Adenosine, 2-[4-(4-chlorophenyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 313348-25-3 HCAPLUS
CN Adenosine, 2-[4-(4-methylphenyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



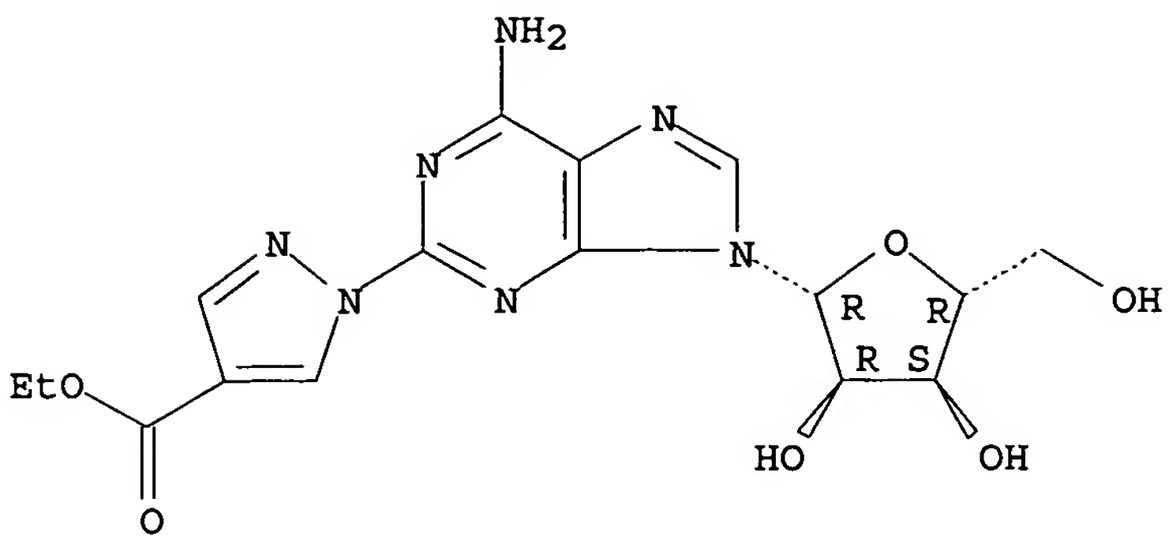
Searched by Thom Larson, STIC, 308-7309

L25 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:454277 HCAPLUS
DOCUMENT NUMBER: 135:266911
TITLE: Novel short-acting A2A adenosine receptor agonists for coronary vasodilation: inverse relationship between affinity and duration of action of A2A agonists
AUTHOR(S): Gao, Zhenhai; Li, Zhihe; Baker, Stephen P.; Lasley, Robert D.; Meyer, Stephanie; Elzein, Elfatih; Palle, Venkata; Zablocki, Jeff A.; Blackburn, Brent; Belardinelli, Luiz
CORPORATE SOURCE: Departments of Pharmacological Sciences, CV Therapeutics, Palo Alto, CA, USA
SOURCE: Journal of Pharmacology and Experimental Therapeutics (2001), 298(1), 209-218
CODEN: JPETAB; ISSN: 0022-3565
PUBLISHER: American Society for Pharmacology and Experimental Therapeutics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Several potent and selective A2A adenosine receptor agonists are currently available. These compds. have a high affinity for the A2A receptor and a long duration of action. However, in situations where a short duration of action is desired, currently available A2A receptor agonists are less than ideal. From a series of recently synthesized A2A receptor agonists, two agonists (CVT-3146 and CVT-3033) with low affinity were selected for further characterization as selective and short-acting coronary vasodilators. Both compds. were selective for the A2A adenosine receptor (AdoR) vs. the A1, A2B, and A3AdoR in binding and functional studies. CVT-3146 and CVT-3033 appeared to be weak partial agonists to cause cAMP accumulation in PC12 cells, but were full and potent agonists to cause coronary vasodilation, a response that has a very large A2A receptor reserve. However, the durations of action of CVT-3146 and CVT-3033 were remarkably shorter than those of the high-affinity agonists CGS21680 or WRC0470, presumably due to the relative lower affinity of CVT-3146 and CVT-3033 for the A2A receptor. Indeed, an inverse relation was found between the affinity of the various agonists for the A2A receptor and the duration of their actions. These data indicate that low-affinity agonists can produce a response that is of equiv. magnitude but more rapid in termination than that caused by a high-affinity agonist. Hence, the low-affinity A2A agonists CVT-3146 and CVT-3033 may prove to be superior to currently available high-affinity agonists as coronary vasodilators during myocardial imaging with radionuclide agents.

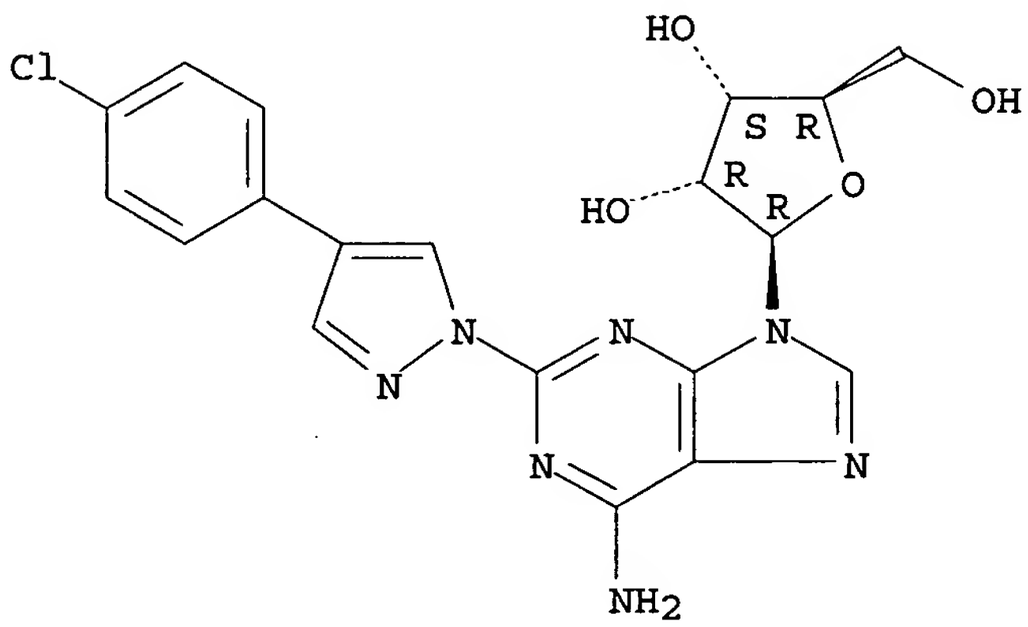
IT **313348-16-2**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(CVT 3127; novel short-acting A2A adenosine receptor agonists for coronary vasodilation and inverse relationship between affinity and duration of action of A2A agonists in relation to cAMP accumulation)
RN 313348-16-2 HCAPLUS
CN 1H-Pyrazole-4-carboxylic acid, 1-(6-amino-9-.beta.-D-ribofuranosyl-9H-purin-2-yl)-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



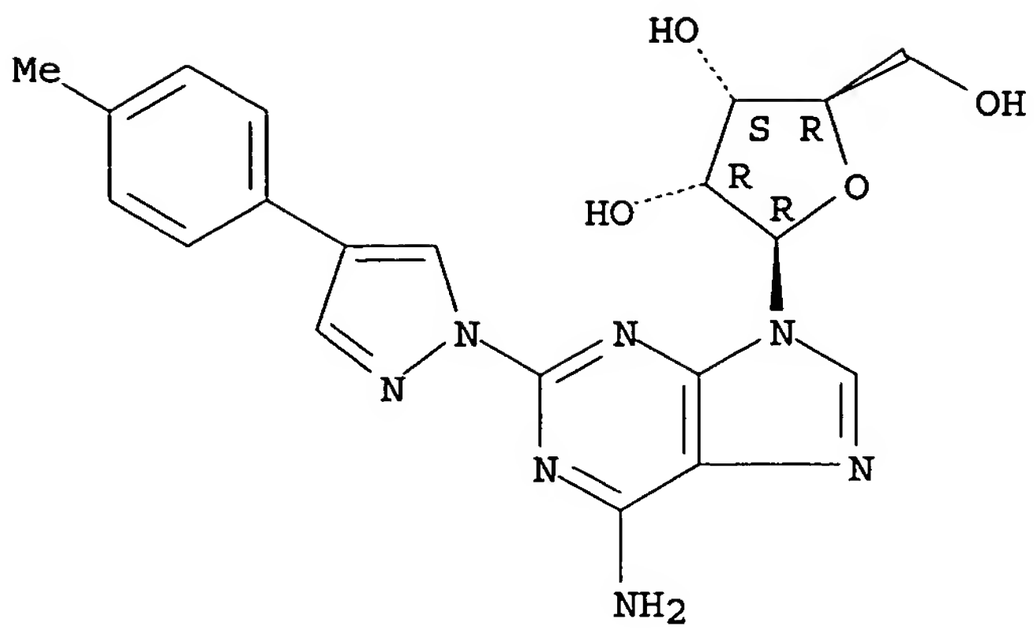
IT **313348-20-8**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(CVT 3141; novel short-acting A2A adenosine receptor agonists for coronary vasodilation and inverse relationship between affinity and duration of action of A2A agonists in relation to cAMP accumulation)
RN 313348-20-8 HCAPLUS
CN Adenosine, 2-[4-(4-chlorophenyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



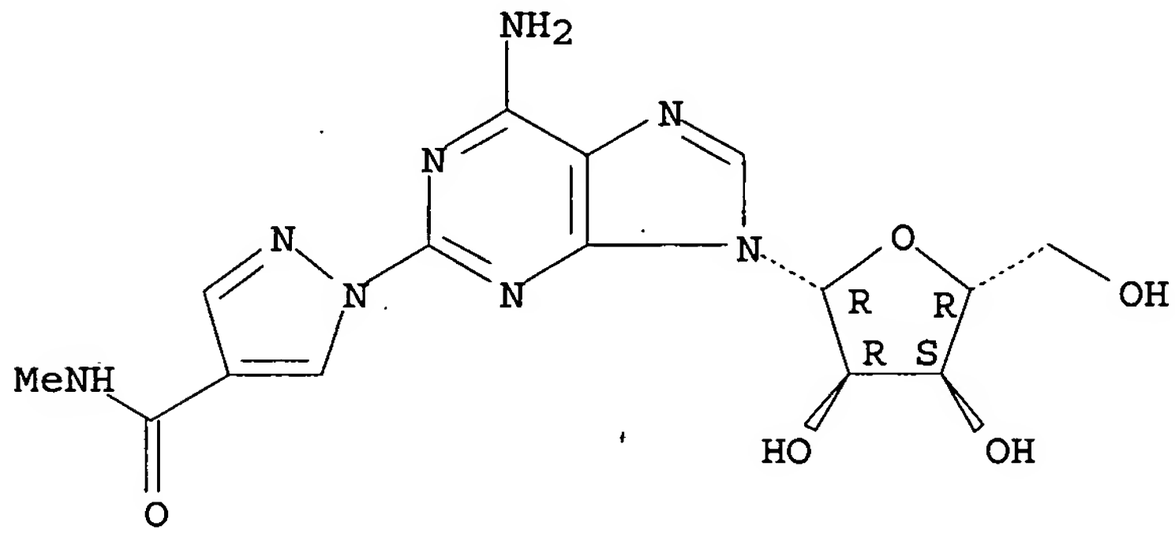
IT **313348-25-3**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(CVT 3144; novel short-acting A2A adenosine receptor agonists for coronary vasodilation and inverse relationship between affinity and duration of action of A2A agonists in relation to cAMP accumulation)
RN 313348-25-3 HCAPLUS
CN Adenosine, 2-[4-(4-methylphenyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **313348-27-5**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(CVT 3146; novel short-acting A2A adenosine receptor agonists for coronary vasodilation and inverse relationship between affinity and duration of action of A2A agonists in relation to cAMP accumulation)
RN 313348-27-5 HCAPLUS
CN Adenosine, 2-[4-[(methylamino)carbonyl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1975:479518 HCAPLUS
DOCUMENT NUMBER: 83:79518
TITLE: Synthesis and coronary vasodilating activity of 2-substituted adenosines
AUTHOR(S): Marumoto, Ryuji; Yoshioka, Yoshio; Miyashita, Osamu; Shima, Shunsuke; Imai, Kinichi; Kawazoe, Katsuyoshi; Honjo, Mikio
CORPORATE SOURCE: Cent. Res. Div., Takeda Chem. Ind., Osaka, Japan
SOURCE: Chem. Pharm. Bull. (1975), 23(4), 759-74
CODEN: CPBTAL
DOCUMENT TYPE: Journal
LANGUAGE: English

Searched by Thom Larson, STIC, 308-7309

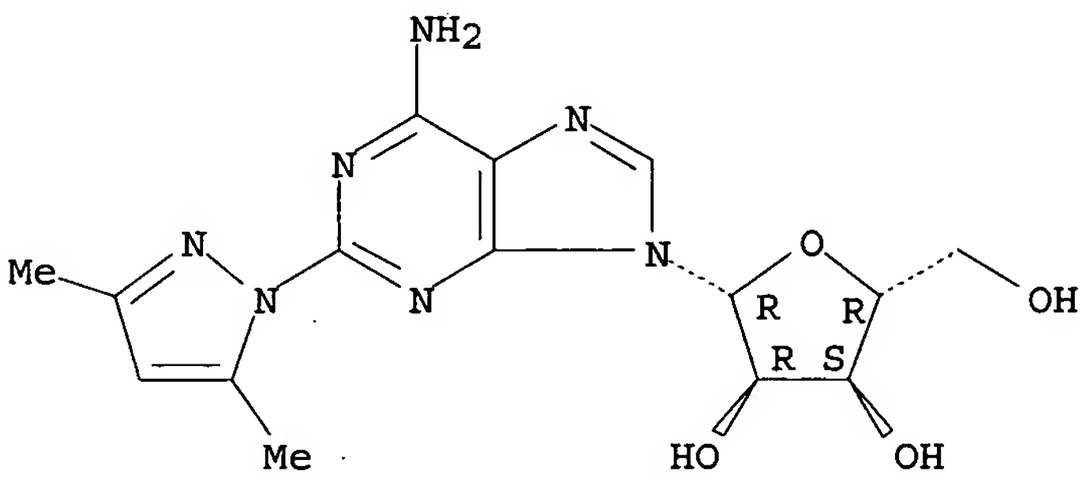
? IN Prod
Lee PTO-1445
NOT "AR"

AB 2-Haloadenosines were prepd. by acetylation of 2-haloinosines followed by chlorination and amination. 2-Alkoxyadenosines were prepd. by protection of 2'- and 3'-OH groups of 2-chloroadenosine (I) or 2-chloroinosine, followed by substitution of the C atom with alkoxy group. The reaction of 5-amino-4-cyano-1-.beta.-D-ribofuranosylimidazole with CS2 afforded 2,6-di-mercapto-9-.beta.-D-ribofuranosylpurine, which was converted to 2-mercaptoadenosine and its S-substituted derivs. 2-Phenylaminoadenosine (II) was prepd. from 2-phenylamino-2',3',5'-tri-O-acetylinosine, which was prepd. by acetylation of 2-phenylaminoinosine with AcCl in HOAc. O-substituted 2-hydroxyadenosines, S-substituted 2-mercaptoadenosines, N2-substituted 2-aminoadenosines, 2-alkyl- and -aryl-adenosines were prepd. among which several compds. had coronary vasodilating potency. II showed not only a strong potency, but also a longer duration of the effect than that of I.

IT **56720-68-4 56720-69-5**
RL: RCT (Reactant)
(coronary vasodilating activity of)

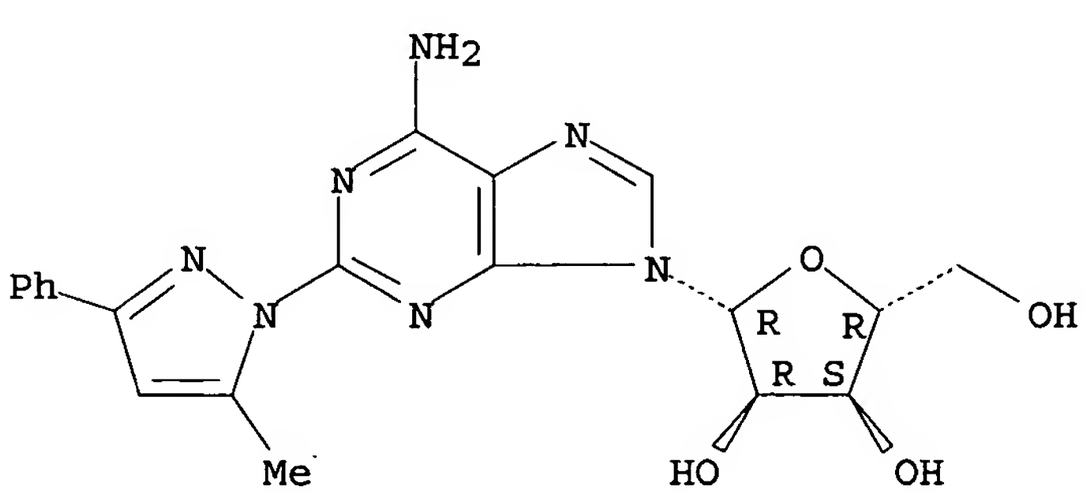
RN 56720-68-4 HCAPLUS
CN Adenosine, 2-(3,5-dimethyl-1H-pyrazol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 56720-69-5 HCAPLUS
CN Adenosine, 2-(5-methyl-3-phenyl-1H-pyrazol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



Searched by Thom Larson, STIC, 308-7309

Structure Search - Beilstein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=> FIL HOME
FILE 'HOME' ENTERED AT 16:15:50 ON 28 AUG 2002

=> FIL BEILSTEIN
FILE 'BEILSTEIN' ENTERED AT 16:15:56 ON 28 AUG 2002
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FILE RELOADED ON APRIL 8, 2002

FILE COVERS 1779 TO 2001.
*** FILE CONTAINS 8,128,462 SUBSTANCES ***

>>> For the revised summary sheet please see:
    http://info.cas.org/ONLINE/DBSS/beilsteinss.html <<<

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    information you have the option to chose the file segment.
    (Use "/XXX.SUB" to search for a bibliographic term in
    substance documents. To restrict the search to reaction
    documents use "/XXX.RX".)
    For additional information see HELP RXS. <<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE  <<<

**********************************************************************
* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST.                 *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE    *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE           *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS.                         *
* FOR PRICE INFORMATION SEE HELP COST                                 *
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L14                 STR
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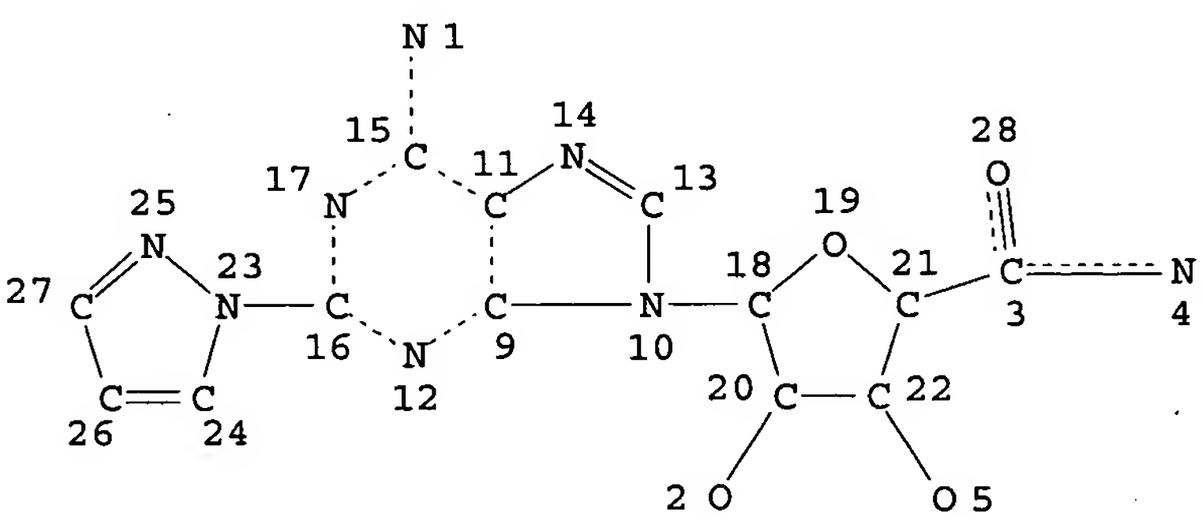

Loop for any substitution.

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NODE ATTRIBUTES:
NSPEC   IS RC     AT   4
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  25

STEREO ATTRIBUTES: NONE
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Searched by Thom Larson, STIC, 308-7309

Point of Contact:
Thomas G. Larson, Ph.D.
703-308-7309
CM1, Rm. 6 B 01

L28 0 SEA FILE=BEILSTEIN SSS FUL L14

No hits

Searched by Thom Larson, STIC, 308-7309

Structures indexed in WO 00/78779 *

Extract Registry Numbers and cross back to CA Plus to get structures to display.

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=> d que
L1            1 SEA FILE=CAPLUS ABB=ON  PLU=ON  WO200078779/PN
L16          22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (1003-03-8/BI OR 104-86-9/BI
                OR 15763-11-8/BI OR 205676-17-1/BI OR 27956-35-0/BI OR
                313348-16-2/BI OR 313348-20-8/BI OR 313348-22-0/BI OR 313348-25
                -3/BI OR 313348-27-5/BI OR 313348-29-7/BI OR 313348-31-1/BI OR
                313348-33-3/BI OR 313348-35-5/BI OR 313348-37-7/BI OR 313348-39
                -9/BI OR 313348-41-3/BI OR 313348-43-5/BI OR 313348-45-7/BI OR
                616-34-2/BI OR 65192-28-1/BI OR 80370-42-9/BI)
L18           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 AND L16


=> D IBIB ABS HITSTR

L18  ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:        2000:911270  HCAPLUS
DOCUMENT NUMBER:         134:56921
TITLE:                   Preparation of nucleoside N-pyrazole as adenosine A2a
                         receptor agonists for purposes of imaging the heart
INVENTOR(S):             Zablocki, Jeff A.; Elzein, Elfatih O.; Palle, Venkata
                         P.
PATENT ASSIGNEE(S):      CV Therapeutics, Inc., USA
SOURCE:                  PCT Int. Appl., 56 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.       KIND  DATE          APPLICATION NO.   DATE
     ---------------  ----  --------      ---------------   --------
     WO 2000078779     A2   20001228      WO 2000-US40281   20000621 <--
     WO 2000078779     A3   20010315
         W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
             CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     US 6403567        B1   20020611      US 1999-338185    19990622
     EP 1189916        A2   20020327      EP 2000-960112    20000621
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     NO 2001006350     A    20020218      NO 2001-6350      20011221
PRIORITY APPLN. INFO.:                 US 1999-338185   A  19990622
                                       WO 2000-US40281  W  20000621
OTHER SOURCE(S):         MARPAT 134:56921
GI
```

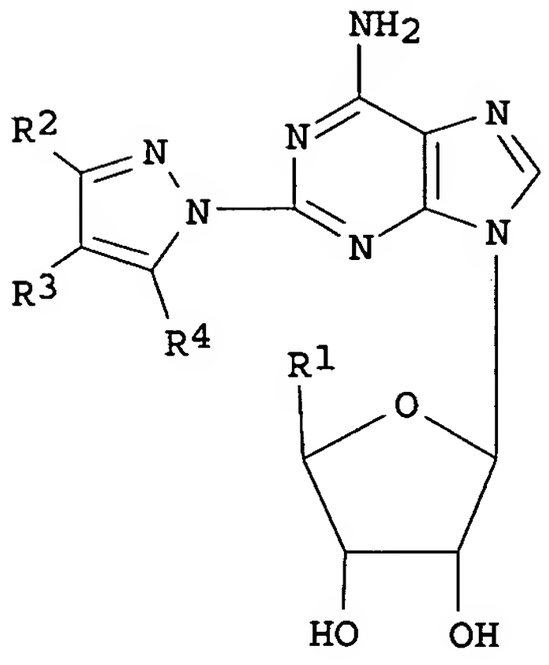
Also Applicant's own work

Too new

In hand

Point of Contact:
Thomas G. Larson, Ph.D.
703-308-7309
CM1, Rm. 6 B 01

* Eric,
WO 00/78779 didn't turn up in the search because a structure where R¹ = –C(=O)–N< is not indexed – see attached hit structures.



I

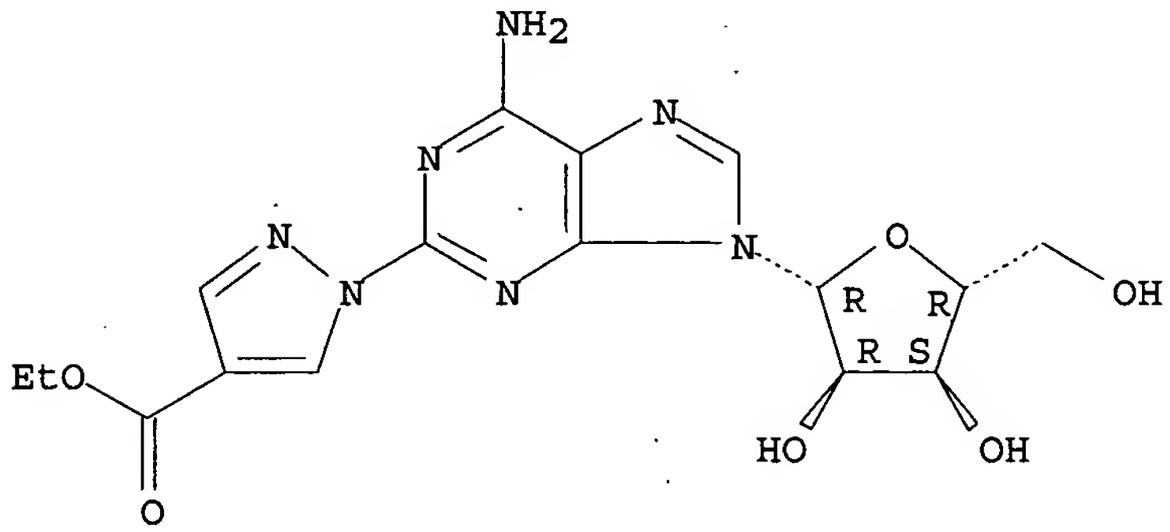
AB 2-Adenosine N-pyrazole compds. I wherein R1 is CH2OH, amide, R2 and R4 are H, alkyl, aryl, R3 is alkyl, halo, NO2, CN, ether, thio ether, amine, sulfone, sulfonamide, ester, and methods for using the compds. as A2A receptor agonists to stimulate mammalian coronary vasodilatation for therapeutic purposes and for purposes of imaging the heart. Thus, I (R1 = OH, R2 = R4 = H, R3 = CO2Et) was prepd. its affinity for the adenosine A2a receptor (Ki = 10-1000 nM), is reported.

IT **313348-16-2P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of nucleoside N-pyrazole as adenosine A2a receptor agonists for purposes of imaging the heart)

RN 313348-16-2 HCAPLUS

CN 1H-Pyrazole-4-carboxylic acid, 1-(6-amino-9-.beta.-D-ribofuranosyl-9H-purin-2-yl)-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



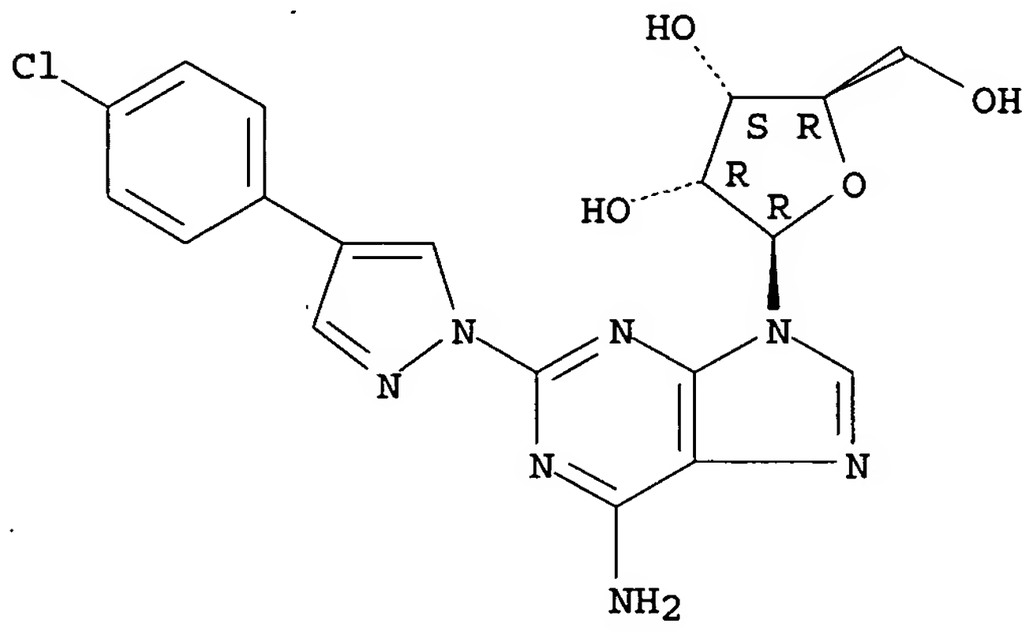
IT **313348-20-8P 313348-22-0P 313348-25-3P**
313348-27-5P 313348-29-7P 313348-31-1P
313348-33-3P 313348-35-5P 313348-37-7P
313348-41-3P 313348-43-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

Searched by Thom Larson, STIC, 308-7309

(prepn. of nucleoside N-pyrazole as adenosine A2a receptor agonists for purposes of imaging the heart)

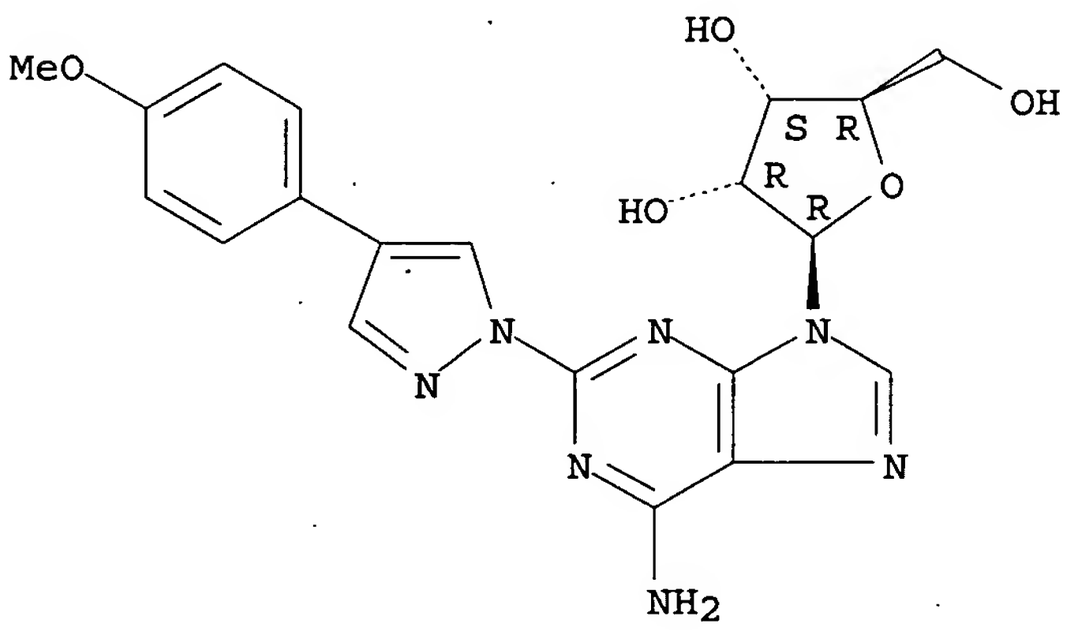
RN 313348-20-8 HCAPLUS
CN Adenosine, 2-[4-(4-chlorophenyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 313348-22-0 HCAPLUS
CN Adenosine, 2-[4-(4-methoxyphenyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

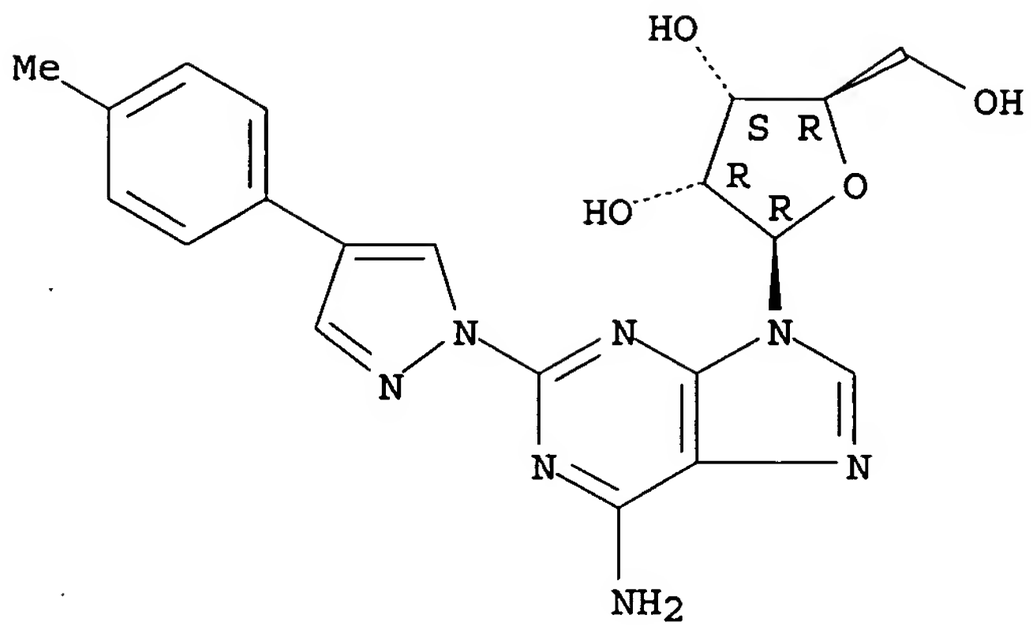
Absolute stereochemistry.



RN 313348-25-3 HCAPLUS
CN Adenosine, 2-[4-(4-methylphenyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

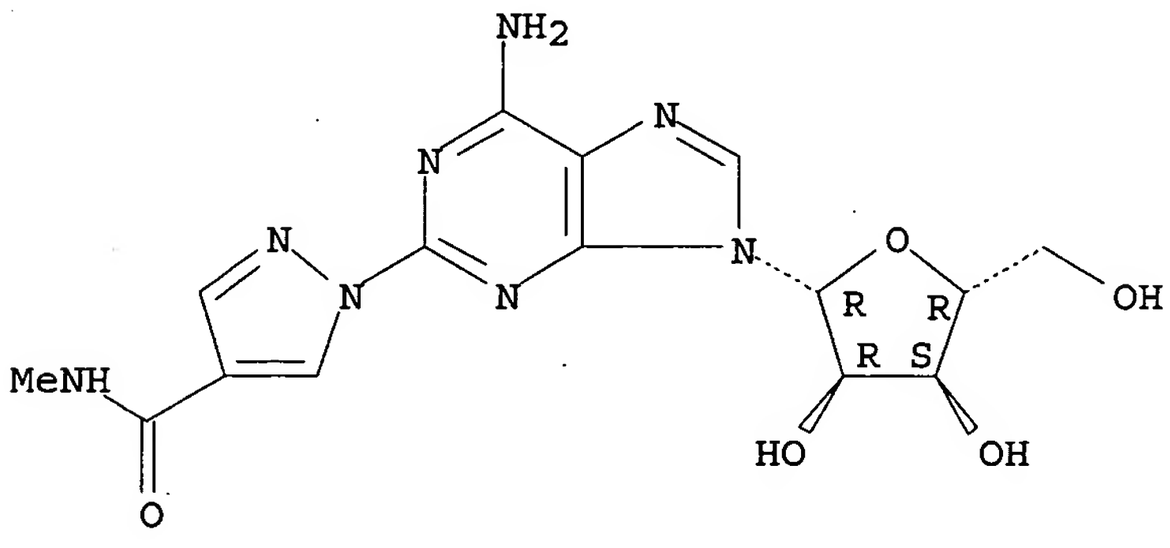
Absolute stereochemistry.

Searched by Thom Larson, STIC, 308-7309



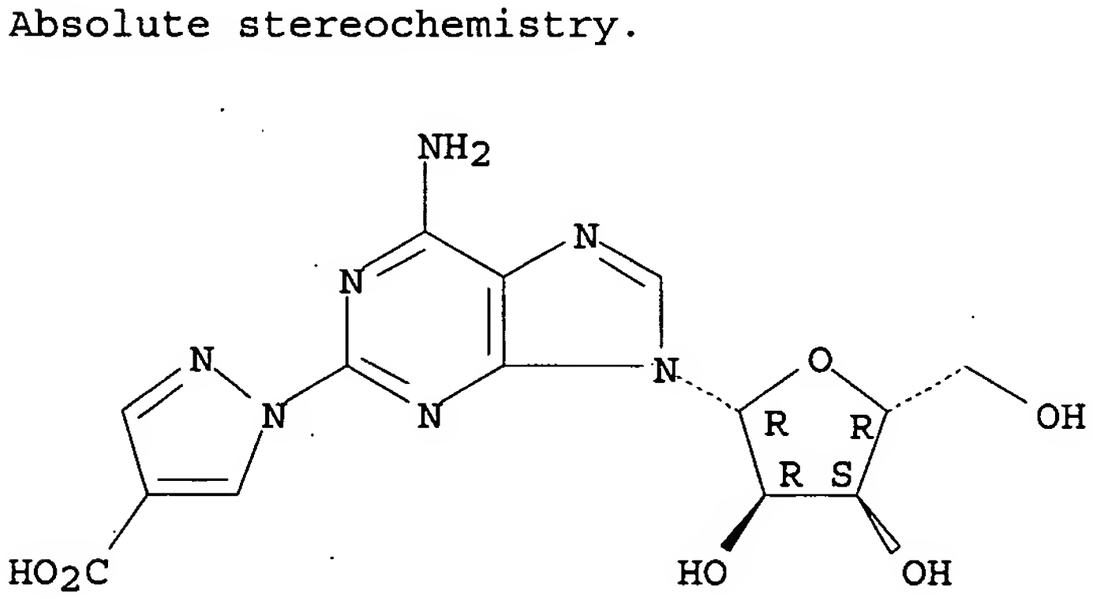
RN 313348-27-5 HCAPLUS
CN Adenosine, 2-[4-[(methylamino)carbonyl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 313348-29-7 HCAPLUS
CN 1H-Pyrazole-4-carboxylic acid, 1-(6-amino-9-.beta.-D-ribofuranosyl-9H-purin-2-yl)- (9CI) (CA INDEX NAME)

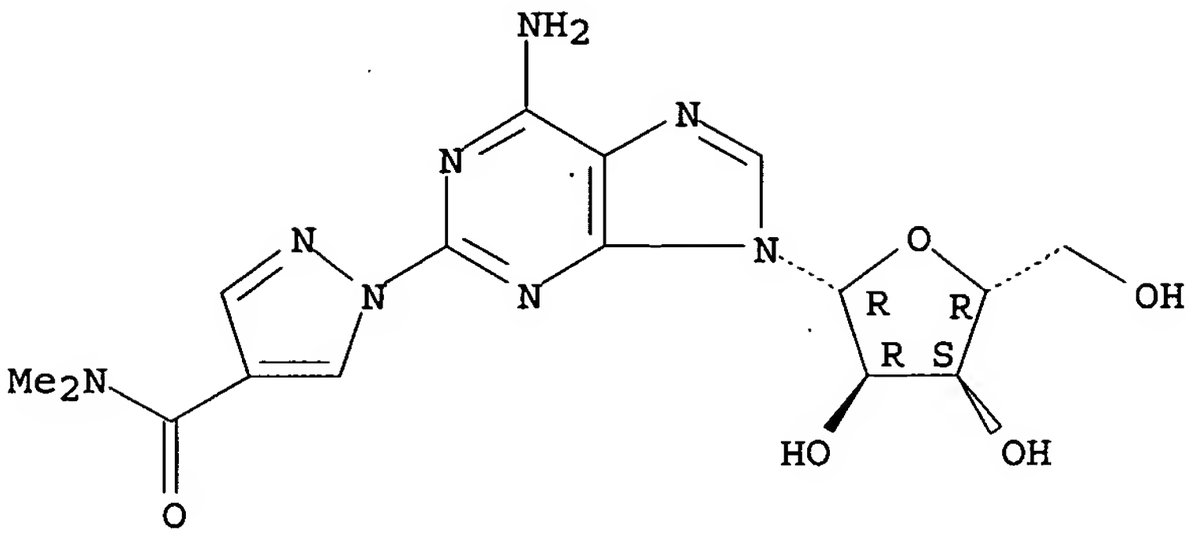
Absolute stereochemistry.



RN 313348-31-1 HCAPLUS
CN Adenosine, 2-[4-[(dimethylamino)carbonyl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

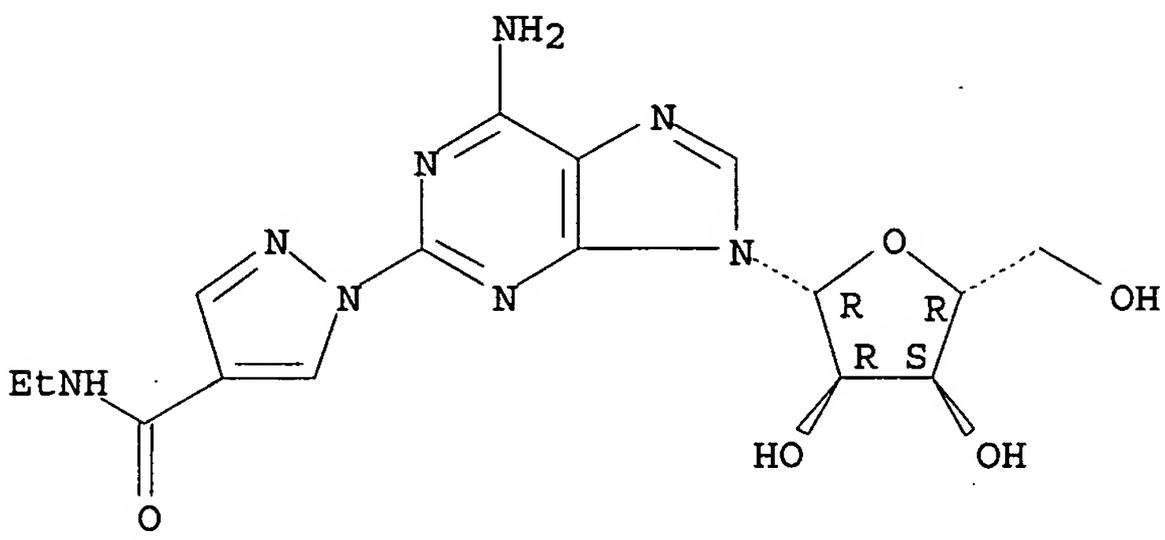
Searched by Thom Larson, STIC, 308-7309

Absolute stereochemistry.



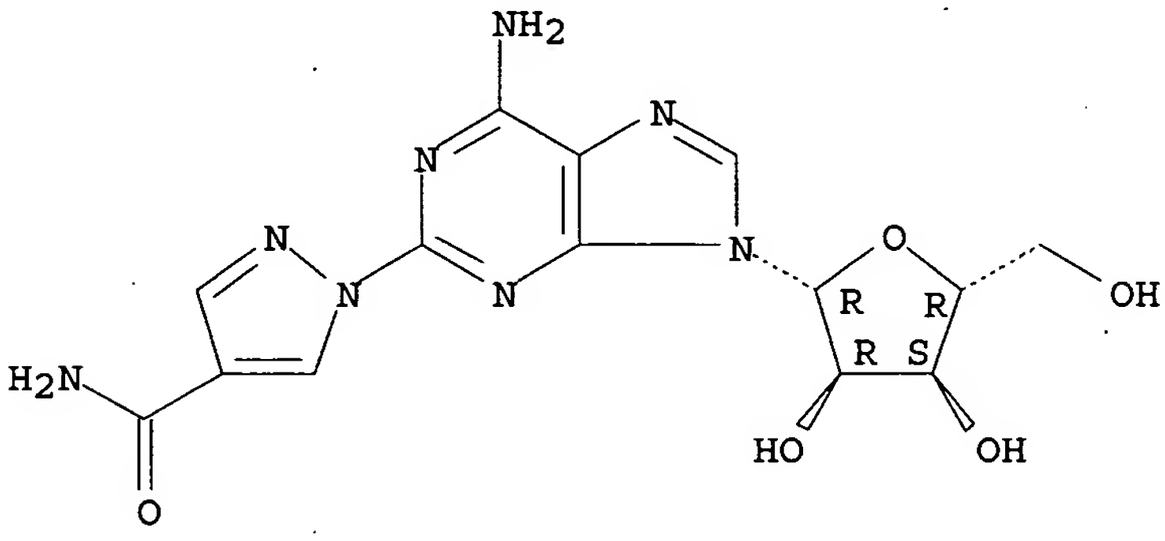
RN 313348-33-3 HCAPLUS
CN Adenosine, 2-[4-[(ethylamino)carbonyl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 313348-35-5 HCAPLUS
CN Adenosine, 2-[4-(aminocarbonyl)-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

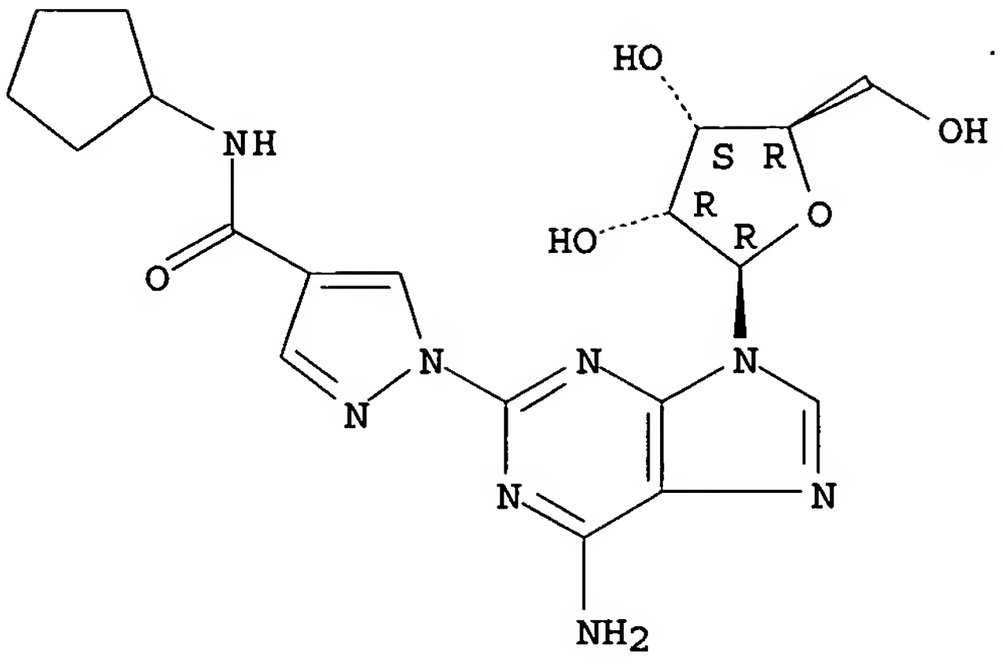
Absolute stereochemistry.



RN 313348-37-7 HCAPLUS
CN Adenosine, 2-[4-[(cyclopentylamino)carbonyl]-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

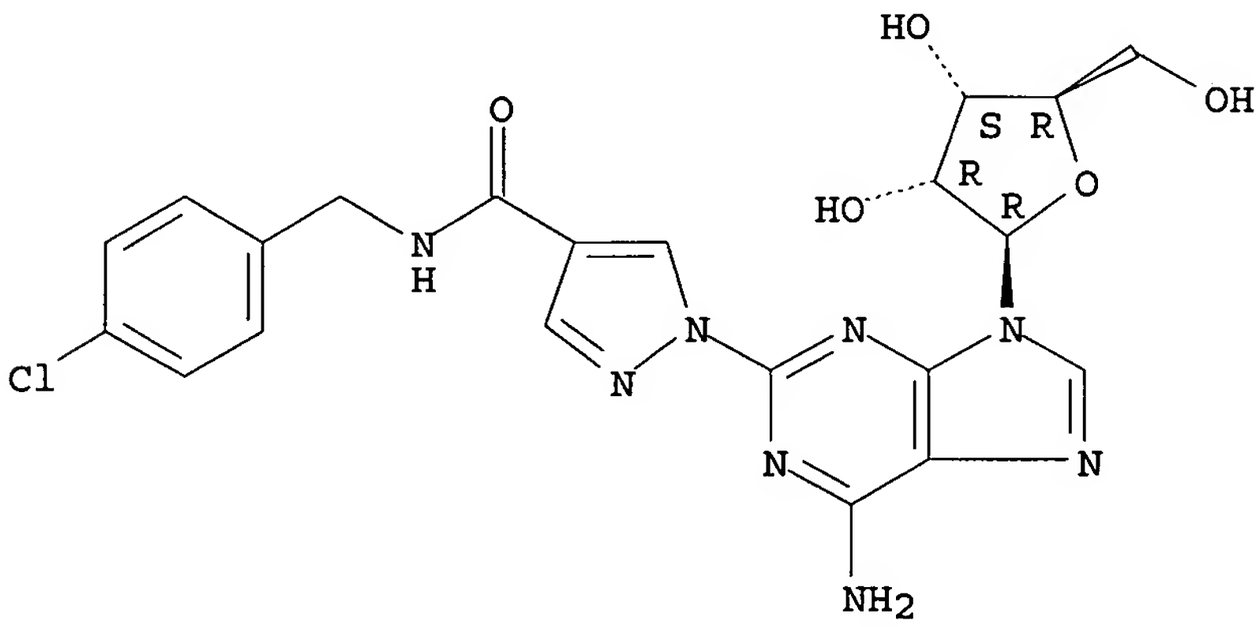
Absolute stereochemistry.

Searched by Thom Larson, STIC, 308-7309



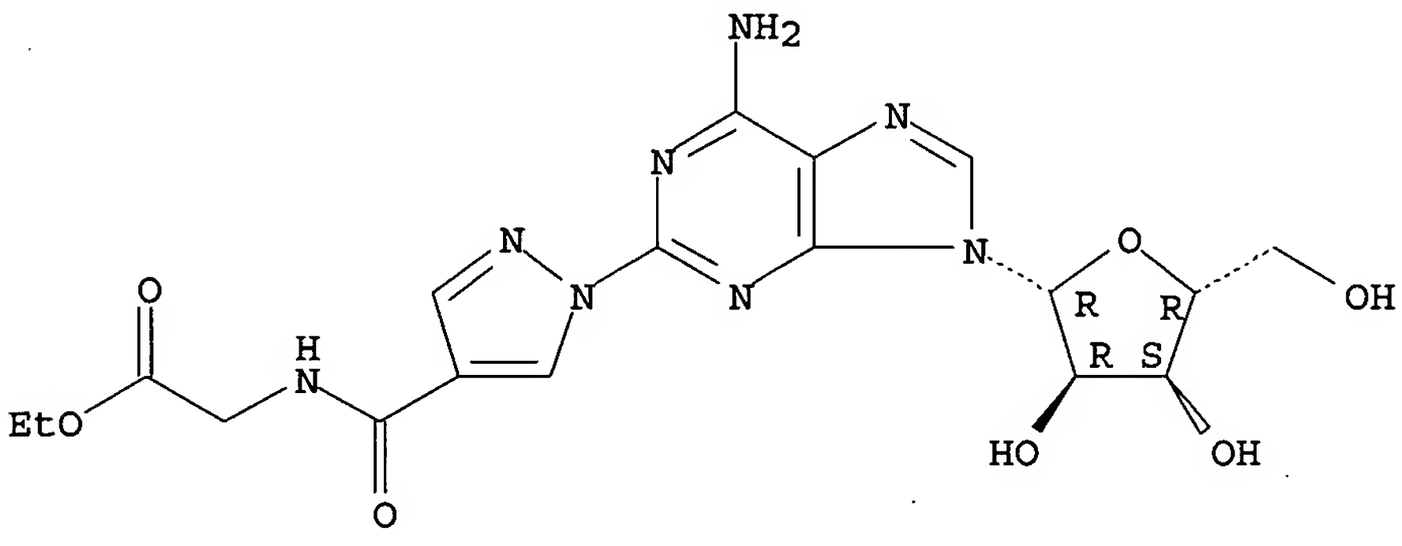
RN 313348-41-3 HCAPLUS
CN Adenosine, 2-[4-[[[(4-chlorophenyl)methyl]amino]carbonyl]-1H-pyrazol-1-yl]-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 313348-43-5 HCAPLUS
CN Glycine, N-[[1-(6-amino-9-.beta.-D-ribofuranosyl-9H-purin-2-yl)-1H-pyrazol-
4-yl]carbonyl]-, ethyl ester (9CI) (CA INDEX NAME)

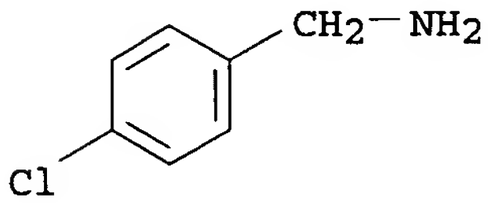
Absolute stereochemistry.



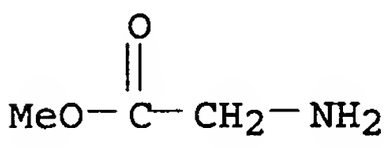
Searched by Thom Larson, STIC, 308-7309

IT **104-86-9**, 4-Chlorobenzylamine **616-34-2**, Glycine methyl ester **1003-03-8**, Cyclopentylamine **15763-11-8** **27956-35-0**, 2-(4-Methyl)phenylmalondialdehyde **65192-28-1** **80370-42-9** **205676-17-1**, 2-(4-Chloro)phenylmalondialdehyde **313348-45-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of nucleoside N-pyrazole as adenosine A2a receptor agonists for purposes of imaging the heart)

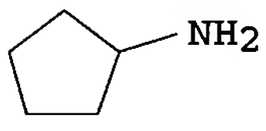
RN 104-86-9 HCAPLUS
CN Benzenemethanamine, 4-chloro- (9CI) (CA INDEX NAME)



RN 616-34-2 HCAPLUS
CN Glycine, methyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

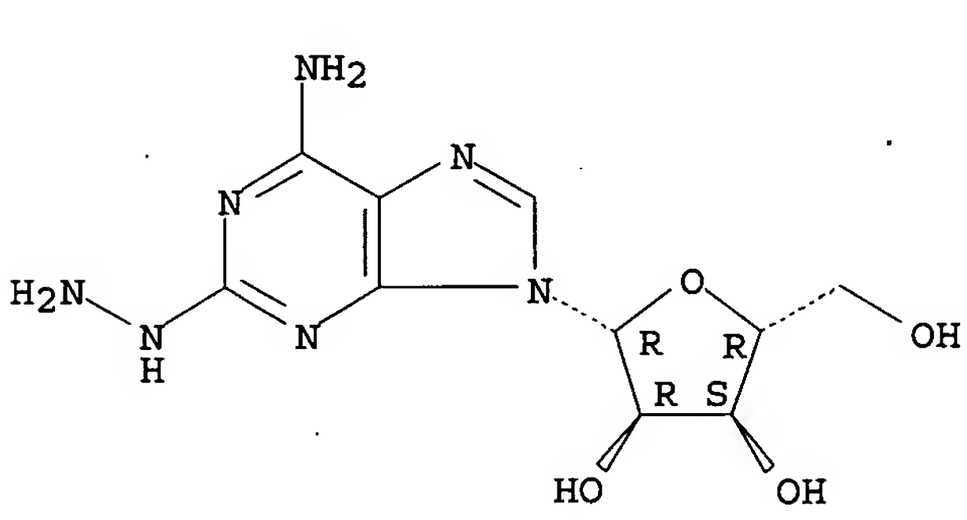


RN 1003-03-8 HCAPLUS
CN Cyclopentanamine (9CI) (CA INDEX NAME)



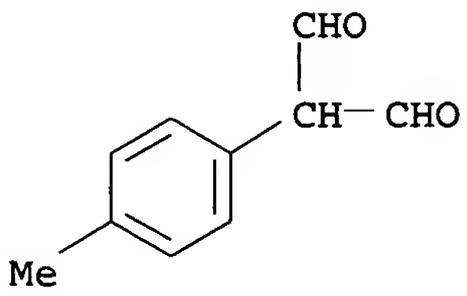
RN 15763-11-8 HCAPLUS
CN Adenosine, 2-hydrazino- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

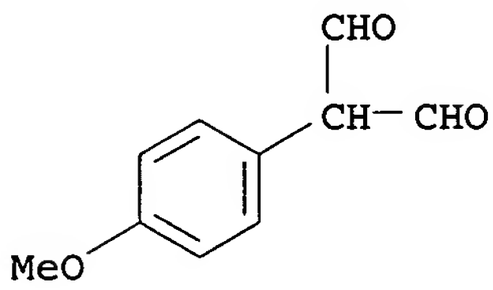


RN 27956-35-0 HCAPLUS
CN Propanedial, (4-methylphenyl)- (9CI) (CA INDEX NAME)

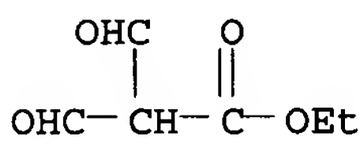
Searched by Thom Larson, STIC, 308-7309



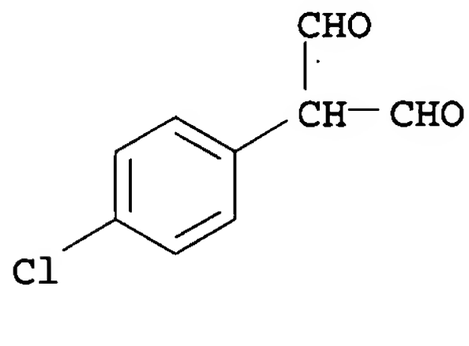
RN 65192-28-1 HCAPLUS
CN Propanedial, (4-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 80370-42-9 HCAPLUS
CN Propanoic acid, 2-formyl-3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



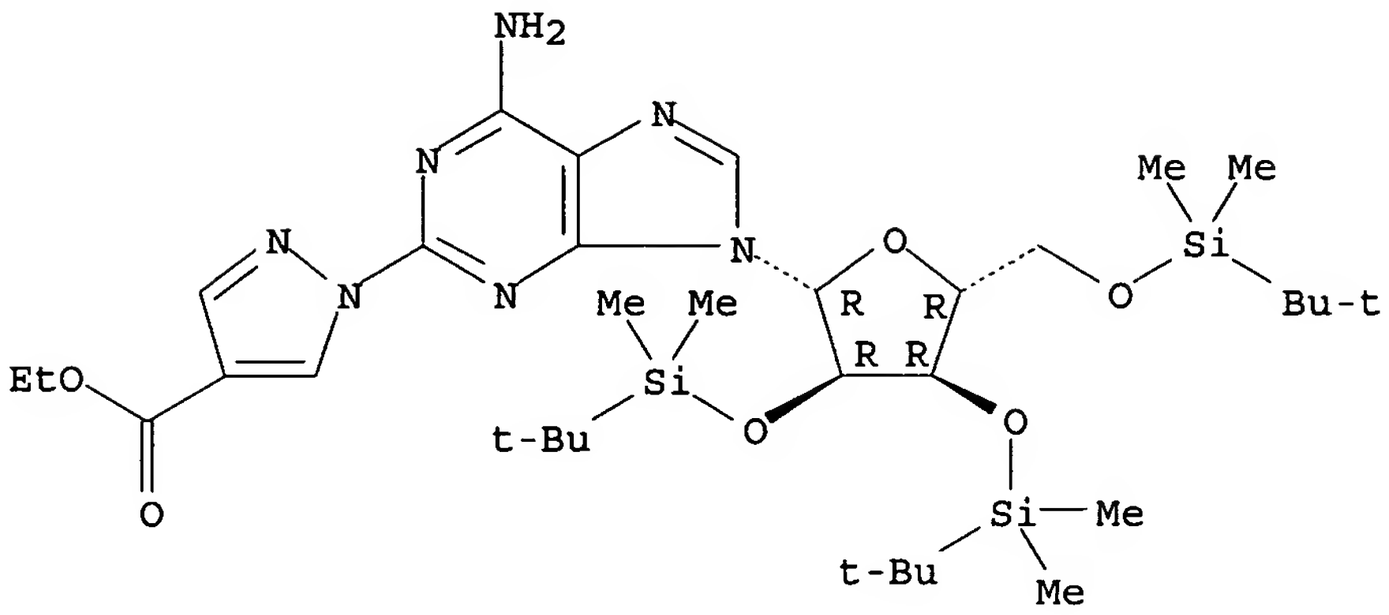
RN 205676-17-1 HCAPLUS
CN Propanedial, (4-chlorophenyl)- (9CI) (CA INDEX NAME)



RN 313348-45-7 HCAPLUS
CN 1H-Pyrazole-4-carboxylic acid, 1-[6-amino-9-[2,3,5-tris-O-[(1,1-dimethylethyl)dimethylsilyl]-.beta.-D-ribofuranosyl]-9H-purin-2-yl]-, ethyl ester (9CI) (CA INDEX NAME)

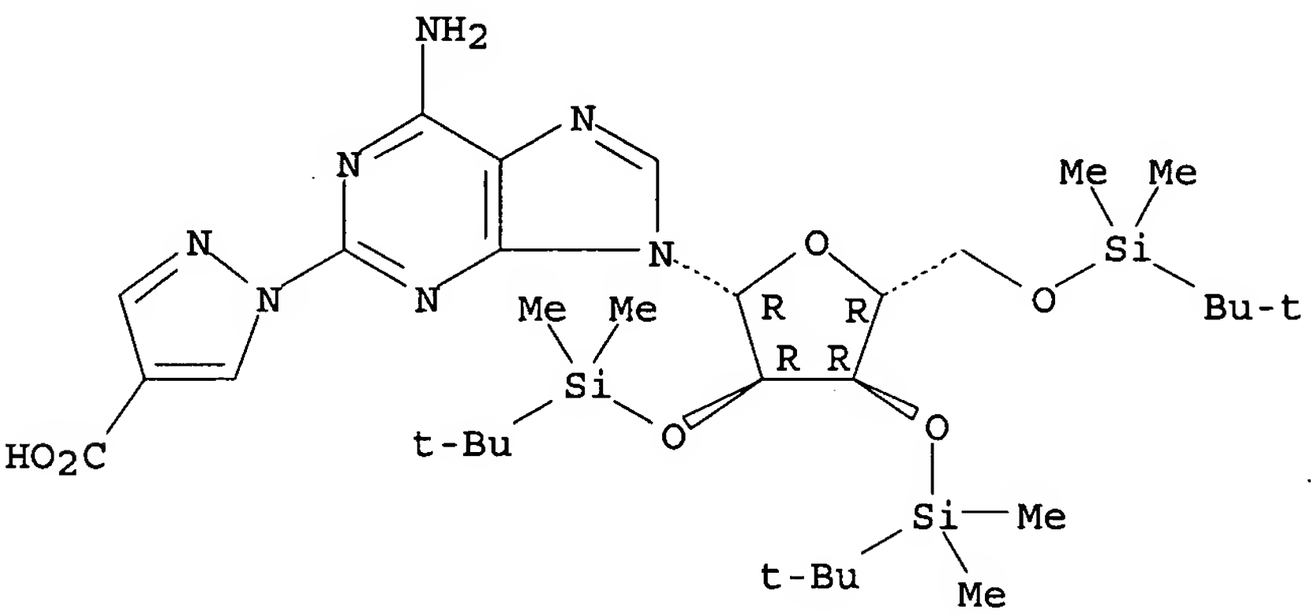
Absolute stereochemistry.

Searched by Thom Larson, STIC, 308-7309



IT **313348-39-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of nucleoside N-pyrazole as adenosine A2a receptor agonists for purposes of imaging the heart)
RN 313348-39-9 HCAPLUS
CN 1H-Pyrazole-4-carboxylic acid, 1-[6-amino-9-[2,3,5-tris-O-[(1,1-dimethylethyl)dimethylsilyl]-.beta.-D-ribofuranosyl]-9H-purin-2-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

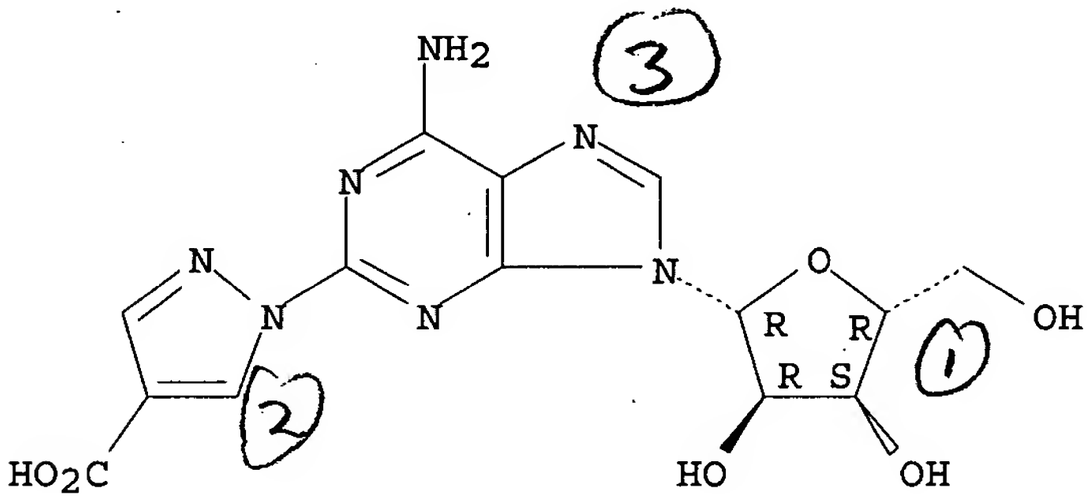


Searched by Thom Larson, STIC, 308-7309

ERIC - FYI on how I obtained the RI> #s for the dictionary search.

L9 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **313348-29-7** REGISTRY
CN 1H-Pyrazole-4-carboxylic acid, 1-(6-amino-9-.beta.-D-ribofuranosyl-9H-purin-2-yl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C14 H15 N7 O6**
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> d rsd

L9 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

Ring System Data

Elemental Analysis EA	Elemental Sequence ES	Size of the Rings SZ	Ring System Formula RF	Ring Identifier RID	RID Occurrence Count
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C3N2	N2C3	5	C3N2	16.165.12	1
C3N2-C4N2	NCNC2-NCNC3	5-6	C5N4	333.446.88	1

1
2
3

Searched by Thom Larson, STIC, 308-7309